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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/761,625	01/22/2004	Meng-An Pan	58268.00350	3541

32294 7590 05/05/2006

SQUIRE, SANDERS & DEMPSEY L.L.P.  
14TH FLOOR  
8000 TOWERS CRESCENT  
TYSONS CORNER, VA 22182

EXAMINER

NGUYEN, TUAN HOANG

ART UNIT PAPER NUMBER

2618

DATE MAILED: 05/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/761,625

Applicant(s)

PAN ET AL.

Examiner

Tuan H. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01/22/2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eidson et al. (U.S PAT. 6,255,906 hereinafter "Eidson") in view of Fukasawa et al. (U.S PAT. 5,715,521 hereinafter "Fukasawa").

Regarding claims 1 and 8, Eidson discloses powering on or off at least one branch of the power amplifier according to the received instruction to enable a logarithmic change in output power of the amplifier (Fig. 1 col. 5 lines 55-67); and amplifying a signal according to the adjusted output power (col. 2 lines 9-12). Eidson differs from the claimed invention in not specifically teaching receiving an instruction to adjust the output power of power amplifier. However, Fukasawa teaches receiving an instruction to adjust the output power of power amplifier (col. 6 lines 46-57). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Eidson for receiving an instruction to adjust the output power of

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power amplifier, such that the sync signals can be transmitted at optimal power level in order to keep total interference within acceptable bounds, as taught by Fukasawa (col. 6 line 46 through col. 7 line 2).

Regarding claim 2, Eidson further discloses transmitting the amplified signal (col. 15 lines 11-14).

Regarding claims 3 and 10, Fukasawa further discloses the instruction specifies a percentage change in power (col. 6 lines 46-57, the controller instructs the variable gain amplifier to adjust its output power to the designated level is determined from the number of stations currently communicating, therefore, the power level is proportional changed (percentage change) when ever the number of stations change).

Regarding claims 4 and 11, Eidson further discloses the instruction specifies a dB change in power (col. 11 lines 13-16).

Regarding claims 5 and 12, Eidson further discloses the powering on or off a branch of the power amplifier linearly in dB changes the output power of the amplifier (col. 5 lines 17-26).

Regarding claims 6 and 13, Eidson further discloses thermometer coded power control words are used to power on and off branches of the amplifier (col. 5 lines 27-34).

Regarding claims 7 and 14, Eidson further discloses the thermometer coded power control words ensure monotonic power control (col. 5 lines 31-34).

Regarding claim 9, Eidson discloses and a determining engine, communicatively coupled to the receiving engine, capable of determining how many branches of a power amplifier to power on or off according to the received instruction to enable a logarithmic change in output power (Fig. 1 col. 5 lines 55-67). Eidson differs from the claimed invention in not specifically teaching a receiving engine capable of receiving an instruction to adjust the output power of power amplifier; and a power amplifier engine, communicatively coupled to the determining engine and the power amplifier, capable of transmitting the determination to the power amplifier. However, Fukasawa teaches a receiving engine capable of receiving an instruction to adjust the output power of power amplifier (col. 6 lines 46-57); and a power amplifier engine, communicatively coupled to the determining engine and the power amplifier, capable of transmitting the determination to the power amplifier (col. 6 lines 46-57). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Eidson for a receiving engine capable of receiving an instruction to adjust the output power of power amplifier; and a power amplifier engine, communicatively coupled to the determining engine and the power amplifier, capable of transmitting the

determination to the power amplifier, such that the sync signals can be transmitted at optimal power level in order to keep total interference within acceptable bounds, as taught by Fukasawa (col. 6 line 46 through col. 7 line 2).

3. Claims 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eidson et al. (U.S PAT. 6,255,906 hereinafter "Eidson") in view of Miyamoto (U.S PAT. 7,023,275).

Regarding claim 15, Eidson discloses a power amplifier, comprising: a plurality of branches for controlling transistors (Fig. 6 col. 14 lines 50-55); and a plurality of transistors, each transistor being communicatively coupled to a branch of the plurality of branches (Fig. 6 col. 14 lines 50-55). Eidson differs from the claimed invention in not specifically teaching the transistors are arranged in a logarithmic scale, thereby enabling a logarithmic change in output power with the powering on or off of a transistor. However, Miyamoto teaches the transistors are arranged in a logarithmic scale, thereby enabling a logarithmic change in output power with the powering on or off of a transistor (col. 7 line 54 through col. 8 line 19). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Eidson for the transistors are arranged in a logarithmic scale, thereby enabling a logarithmic change in output power with the powering on or off of a transistor, as per teaching of Miyamoto, such that it provides a variable gain amplifier includes: an amplifying transistor which amplifies an input signal and a current path control section

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which controls a size of the amplifying transistor and a path of a current through the amplifying transistor.

Regarding claim 16, Eidson further discloses the powering on or off a branch of the power amplifier linearly in dB changes the output power of the amplifier (col. 5 lines 17-26).

Regarding claim 16, Eidson further discloses a transmitter comprising a power amplifier (col. 15 lines 11-14).

### ***Conclusion***

4. Any response to this action should be mailed to:

Mail Stop\_\_\_\_\_ (Explanation, e.g., Amendment or After-final, etc.)

Commissioner for Patents

P.O. Box 1450

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Facsimile responses should be faxed to:

(571) 273-8300

Hand-delivered responses should be brought to:

Customer Service Window

Randolph Building

401 Dulany Street  
Alexandria, VA 22313

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan H. Nguyen whose telephone number is (571) 272-8329. The examiner can normally be reached on 8:00Am - 5:00Pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Maung Nay A. can be reached on (571) 272-7882. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tuan Nguyen  
Examiner  
Art Unit 2618

  
NAY MAUNG  
SUPERVISORY PATENT EXAMINER